

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|--|----------|------------------|---------|------------------|
| L1 | 2 | ("5796534" "4978902").pn. | USPAT | OR | OFF | 2005/05/04 14:05 |
| L11 | 46 | ((fly adj1 height) or (head adj1 height) or ((ang\$4 or radial) adj8 position)) same (collision or crash or protrusion or impact or shock) and (spindle) and (pzt or (piezoelectric)) | USPAT | OR | ON | 2005/05/04 14:41 |
| L12 | 25 | ((fly adj1 height) or (head adj1 height) or ((ang\$4 or radial) adj8 position)) same (collision or crash or protrusion or impact or shock) and (spindle) and (pzt or (piezoelectric)) | US-PGPUB | OR | ON | 2005/05/04 14:41 |
| L13 | 0 | ((fly adj1 height) or (head adj1 height) or ((ang\$4 or radial) adj8 position)) same (collision or crash or protrusion or impact or shock) and (spindle) and (pzt or (piezoelectric)) | EPO | OR | ON | 2005/05/04 14:41 |
| L14 | 0 | ((fly adj1 height) or (head adj1 height) or ((ang\$4 or radial) adj8 position)) same (collision or crash or protrusion or impact or shock) and (spindle) and (pzt or (piezoelectric)) | JPO | OR | ON | 2005/05/04 14:42 |
| L15 | 0 | ((fly adj1 height) or (head adj1 height) or ((ang\$4 or radial) adj8 position)) same (collision or crash or protrusion or impact or shock) and (spindle) and (pzt or (piezoelectric)) | DERWENT | OR | ON | 2005/05/04 14:42 |
| L16 | 0 | ((fly adj1 height) or (head adj1 height) or ((ang\$4 or radial) adj8 position)) same (collision or crash or protrusion or impact or shock) and (spindle) and (pzt or (piezoelectric)) | IBM_TDB | OR | ON | 2005/05/04 14:42 |
| L17 | 223 | ((radial or angular) near5 position\$3) same ((detect\$3 or determin\$3 or evaluat\$3 or ascertain\$3 or establish\$3 or monitor\$3) near10 (collision or crash or impact or protrusion or shock)) | USPAT | OR | ON | 2005/05/04 14:42 |
| L18 | 5 | ("369"/\$.ccls.) and 17 | USPAT | OR | ON | 2005/05/04 14:43 |
| L19 | 14 | ("360"/\$.ccls.) and 17 | USPAT | OR | ON | 2005/05/04 14:42 |
| L20 | 181 | ((acoustic or sound or harmonic or (elastic adj5 wave) or (sound adj1 wave)) near5 sensor) same ((fl\$4 near2 height) or crash\$3 or protrusion or collision or asperity or attitude) | USPAT | OR | ON | 2005/05/04 14:43 |
| L21 | 4 | ("369"/\$.ccls.) and 20 | USPAT | OR | ON | 2005/05/04 14:44 |

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| L22 | 24 | ("360"/\$.ccls.) and 20 | USPAT | OR | ON | 2005/05/04 14:44 |
| L23 | 19 | (index\$3) same (polar adj coordinate) same (dis\$2 or medium or storage or drive) | USPAT | OR | ON | 2005/05/04 14:44 |
| L24 | 2 | (index\$3) same (polar adj coordinate) same (dis\$2 or medium or storage or drive) | US-PGPUB | OR | ON | 2005/05/04 14:44 |
| L25 | 0 | (index\$3) same (polar adj coordinate) same (dis\$2 or medium or storage or drive) | EPO | OR | ON | 2005/05/04 14:44 |
| L26 | 1 | (index\$3) same (polar adj coordinate) same (dis\$2 or medium or storage or drive) | JPO | OR | ON | 2005/05/04 14:44 |
| L27 | 0 | (index\$3) same (polar adj coordinate) same (dis\$2 or medium or storage or drive) | DERWENT | OR | ON | 2005/05/04 14:44 |
| L28 | 0 | (index\$3) same (polar adj coordinate) same (dis\$2 or medium or storage or drive) | IBM_TDB | OR | ON | 2005/05/04 14:44 |
| L29 | 6 | (HDI or (head near2 dis\$2 near2 (interference or interface))) same (acoustic adj3 emission adj3 sensor) same (medium or media or dis\$2) | USPAT | OR | ON | 2005/05/04 14:45 |
| L30 | 6 | (detect\$3 or avoid\$3) near10 (protrusion asperity crash collision impact) near10 (head actuator transducer slider) near10 (magnetic) same (trigonometry trigonometric function sine cosine) | USPAT | OR | ON | 2005/05/04 14:47 |
| L31 | 3 | (detect\$3 or avoid\$3) near10 (protrusion asperity crash collision impact) near10 (head actuator transducer slider) near10 (magnetic) same (trigonometry trigonometric function sine cosine) | US-PGPUB | OR | ON | 2005/05/04 14:47 |
| L32 | 0 | (detect\$3 or avoid\$3) near10 (protrusion asperity crash collision impact) near10 (head actuator transducer slider) near10 (magnetic) same (trigonometry trigonometric function sine cosine) | EPO | OR | ON | 2005/05/04 14:47 |
| L33 | 3 | (detect\$3 or avoid\$3) near10 (protrusion asperity crash collision impact) near10 (head actuator transducer slider) near10 (magnetic) same (trigonometry trigonometric function sine cosine) | JPO | OR | ON | 2005/05/04 14:47 |
| L34 | 3 | (detect\$3 or avoid\$3) near10 (protrusion asperity crash collision impact) near10 (head actuator transducer slider) near10 (magnetic) same (trigonometry trigonometric function sine cosine) | DERWENT | OR | ON | 2005/05/04 14:47 |

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| L35 | 0 | (detect\$3 or avoid\$3) near10 (protrusion asperity crash collision impact) near10 (head actuator transducer slider) near10 (magnetic) same (trigonometry trigonometric function sine cosine) | IBM_TDB | OR | ON | 2005/05/04 14:47 |
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